

CLAIMS:

1. A color filter including a first, a second and a third region positioned adjacent to one another,

the first region comprising a first uniaxially ordered base material, a first isotropic colorant adapted to selectively transmit light of a first color in response to light being incident on the filter and a first dichroic colorant uniaxially aligned by the first base material and adapted to absorb light of the first color,

the second region comprising a second uniaxially ordered base material, a second isotropic colorant adapted to selectively transmit light of a second color in response to light being incident on the filter and a second dichroic colorant uniaxially aligned by the second base material and adapted to absorb light of the second color, and

the third region comprising a third uniaxially ordered base material, a third isotropic colorant adapted to selectively transmit light of a third color in response to light being incident on the filter and a third dichroic colorant uniaxially aligned by the third base material and adapted to absorb light of the third color.

2. A color filter as claimed in claim 1 wherein the color filter is a filter for filtering white light and the first, the second and the third color is a red, a green and a blue color respectively.

3. A color filter as claimed in claim 2 wherein the color filter is a filter for filtering white light and the first, the second and the third color is a cyan, a magenta and a yellow color respectively.

4. A color filter as claimed in claim 1, 2 or 3 including a fourth region comprising a fourth uniaxially ordered base material, a fourth isotropic colorant adapted to selectively transmit light of a fourth color in response to light being incident on the filter and a fourth dichroic colorant uniaxially aligned by the fourth base material and adapted to absorb light of the fourth color.

5. A color filter as claimed in claim 1, 2, 3 or 4 wherein the first and/or the second and/or the third and/or, if present, the fourth base material are one and the same material.

5 6. A color filter as claimed in claim 1, 2, 3, 4 or 5 comprising a polymeric base material.

7. A color filter as claimed in claim 1, 2, 3, 4, 5 or 6 wherein an isotropic and/or a dichroic colorant is a dye or a pigment.

10 8 A color filter as claimed in any one of the preceding claims including a region wherein a dichroic colorant and a base material are combined into one uniaxially oriented dichroic base material adapted to absorb the color selectively transmitted by the isotropic colorant of said region.

15 9. A color filter as claimed in any one of the preceding claims wherein the first, the second and the third region comprise a common dichroic colorant adapted to absorb the first, the second and the third color respectively.

20 10. A liquid crystal display cell comprising a first substrate, a second substrate and, disposed therebetween, a combination of a color filter as claimed in claim in any one of the preceding claims and a polarizer.

11. A combination of a color filter as claimed in claim 1 wherein the base material is planar uniaxially ordered and a homeotropically ordered layer including a first, a second and a third region arranged opposite a first, a second and a third region of the color filter respectively,

25 the first region of the homeotropically ordered layer comprising a first homeotropically ordered base material and a first dichroic colorant homeotropically aligned by the first base material, the first dichroic colorant being identical to the first dichroic colorant of the first region of the color filter,

30 the second region of the homeotropically ordered layer comprising a second homeotropically ordered base material and a second dichroic colorant homeotropically

aligned by the second base material, the second dichroic colorant being identical to the second dichroic colorant of the second region of the color filter,

the third region of the homeotropically ordered layer comprising a third homeotropically ordered base material and a third dichroic colorant homeotropically aligned by the third base material, the third dichroic colorant being identical to the third dichroic colorant of the third region of the color filter.

12. A color filter as claimed in any of the claims 1 to 9 comprising a liquid crystal base material rendering the color filter electrically switchable.

13. A color filter as claimed in claim 12 comprising a region of which the base material is an anisotropic gel comprising a homeotropically ordered liquid crystal and a homeotropically ordered polymeric network of cross-linked liquid crystal which is immersed in the liquid crystal throughout the gel and of which the dichroic colorant is homeotropically aligned by the ordered liquid crystal.

14. A liquid crystal display device comprising a color filter as claimed in claim in any one of the preceding claims.

15. A polarization-selective color filter for filtering light incident thereon including at least one region comprising a uniaxially ordered base material, an isotropic colorant adapted to selectively transmit light of a first color from the light incident on the filter and a dichroic colorant uniaxially aligned by the base material and adapted to absorb light of the first color.